

## WE CLAIM:

1. A method for treating a vision <sup>impairment</sup> disorder, improving vision, treating memory impairment, or enhancing memory performance in an animal, which comprises administering to said animal an effective amount of a ~~pipecolic acid derivative~~ <sup>compound</sup>.

2. The method of claim 1, wherein the ~~pipecolic acid derivative~~ <sup>compound</sup> has an affinity for an FKBP-type immunophilin.

3. The method of claim 2, wherein the FKBP-type immunophilin is FKBP-12.

4. The method of claim 1, wherein the ~~pipecolic acid derivative~~ <sup>compound</sup> is immunosuppressive or non-immunosuppressive.

5. The method of claim 1, wherein the vision <sup>impairment</sup> ~~disorder~~ <sup>is derived from</sup> is selected from the group consisting of: visual impairments; orbital disorders; disorders of the lacrimal <sup>apparatus</sup> ~~apparatus~~; disorders of the eyelids; disorders of the conjunctiva; disorders of the cornea; cataract; disorders of the uveal tract; disorders of the retina; disorders of the optic nerve or visual pathways; free radical induced eye disorders and diseases; immunologically-mediated eye disorders and diseases;

eye injuries; and symptoms and complications of eye disease, eye disorder, or eye injury.

Sub  
B2/

5 6. The method of claim 1, wherein the pipecolic acid derivative is Way-124,666.

a  
a

7. The method of claim 1, wherein the <sup>compound</sup>~~pipecolic~~ acid derivative is rapamycin.

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a  
a

8. The method of claim 1, wherein the <sup>compound</sup>~~pipecolic~~ acid derivative is Rap-Pa.

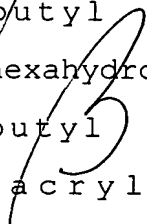
a  
a  
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9. The method of claim 1, wherein the <sup>compound</sup>~~pipecolic~~ acid derivative is SLB-506.

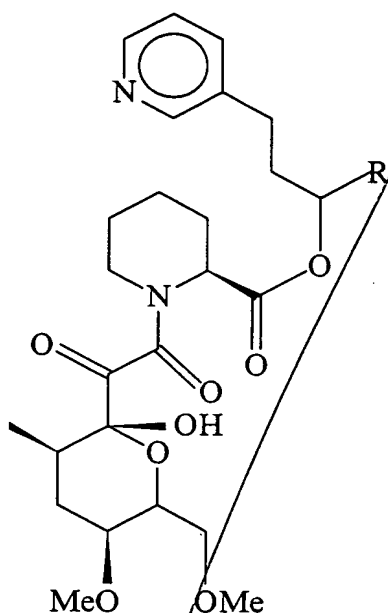
a  
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10. The method of claim 1, wherein the <sup>compound</sup>~~pipecolic~~ acid derivative is selected from the group consisting of:

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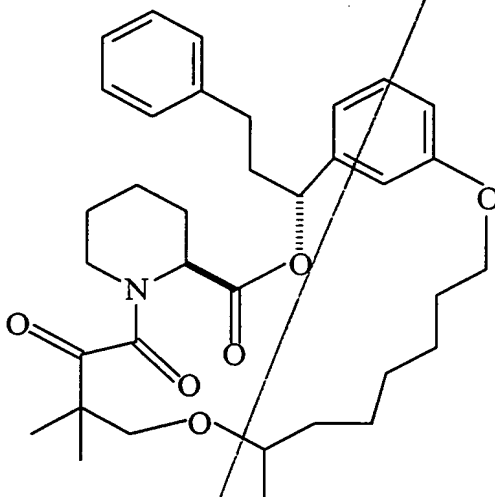
4-(4-methoxyphenyl)butyl (2S)-1-[2-(3,4,5-trimethoxyphenyl)acetyl]hexahydro-2-pyridinecarboxylate;  
4-(4-methoxyphenyl)butyl (2S)-1-[2-(3,4,5-trimethoxyphenyl)acryloyl]hexahydro-2-pyridinecarboxylate;  
4-(4-methoxyphenyl)butyl (2S)-1-[2-(3,4,5-trimethoxyphenyl)propanoyl]hexahydro-2-pyridinecarboxylate;  
4-(4-methoxyphenyl)butyl (2S)-1-[2-oxo-2-(3,4,5-trimethoxyphenyl)acetyl]hexahydro-2-pyridinecarboxylate;



- 3-cyclohexylpropyl (2S)-1-(3,3-dimethyl-2-oxopentanoyl)hexahydro-2-pyridinecarboxylate;  
 3-phenylpropyl (2S)-1-(3,3-dimethyl-2-oxopentanoyl)hexahydro-2-pyridinecarboxylate;  
 3-(3,4,5-trimethoxyphenyl)propyl (2S)-1-(3,3-dimethyl-2-oxopentanoyl)hexahydro-2-pyridinecarboxylate;  
 (1R)-2,2-dimethyl-1-phenethyl-3-butenyl (2S)-1-(3,3-dimethyl-2-oxopentanoyl)hexahydro-2-pyridinecarboxylate;  
 (1R)-1,3-diphenylpropyl (2S)-1-(3,3-dimethyl-2-oxopentanoyl)hexahydro-2-pyridinecarboxylate;  
 (1R)-1-cyclohexyl-3-phenylpropyl (2S)-1-(3,3-dimethyl-2-oxopentanoyl)hexahydro-2-pyridinecarboxylate;  
 (1S)-1,3-diphenylpropyl (2S)-1-(3,3-dimethyl-2-oxopentanoyl)hexahydro-2-pyridinecarboxylate;  
 (1S)-1-cyclohexyl-3-phenylpropyl (2S)-1-(3,3-dimethyl-2-oxopentanoyl)hexahydro-2-pyridinecarboxylate;

(22aS) - 15, 15-dimethylperhydropyrido[2,1-c][1,9,4]dioxazacyclononadecine-1,12,16,17-tetraone;

(24aS) - 17, 17-dimethylperhydropyrido[2,1-c][1,9,4]dioxazacyclohenicosine-1,14,18,19-tetraone;

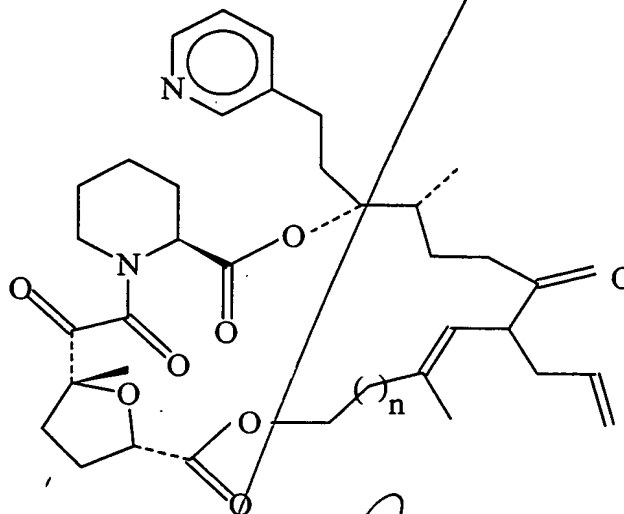


(3R,4R,23aS) - 8-allyl-4,10-dimethyl-3-[2-(3-pyridyl)ethyl]-1,3,4,5,6,7,8,11,12,15,16,17,18,20,21,22,23,23a-octadecahydro-14H-pyrido[2,1-c][1,10,4]dioxazacycloicosine-1,7,14,17,18-pentaone;

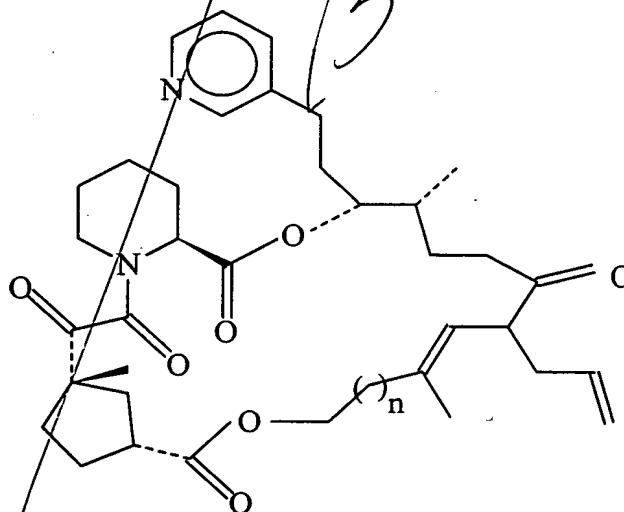
(3R,4R,24aS) - 8-allyl-4,10-dimethyl-3-[2-(3-pyridyl)ethyl]-1,3,4,5,6,7,8,11,12,14,15,16,17,18,19,21,22,23,24,24a-icosahydropyrido[2,1-c][1,11,4]dioxazacyclohenicosine-1,7,14,18,19-pentaone;

(3R,4R,25aS) - 8-allyl-4,10-dimethyl-3-[2-(3-pyridyl)ethyl]-1,3,4,5,6,7,8,11,12,15,16,17,18,19,20,22,23,24,25,25a-icosahydro-14H-pyrido[2,1-c]

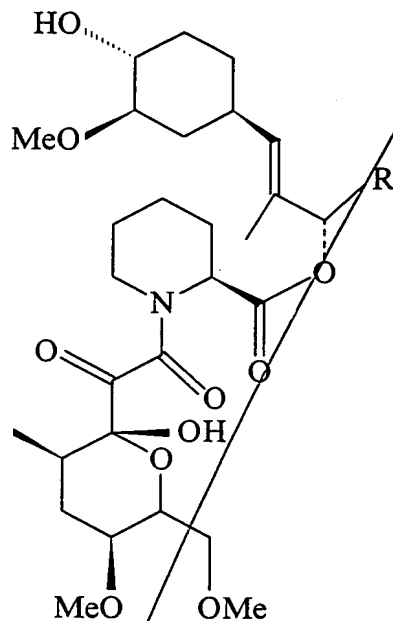
[1,12,4]dioxazacyclodocosine-1,7,14,19,20-pentaone;



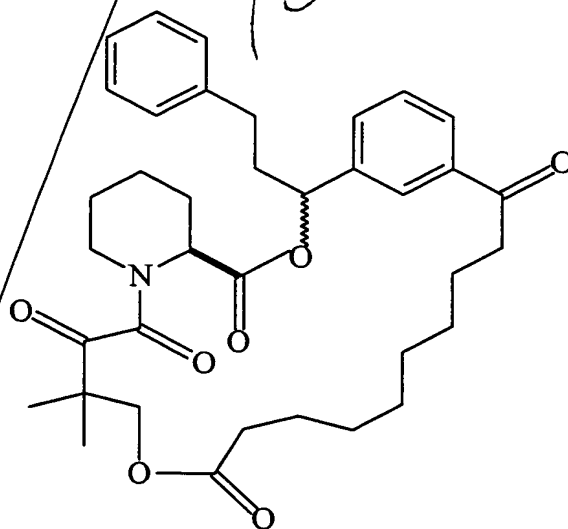
wherein n is 1; 2; or 3;



wherein n is 1; 2; or 3;



(1R)-1-(3-benzoylphenyl)-3-phenylpropyl (1R)-2-(3,3-dimethyl-2-oxopentanoyl) cyclohexane-1-carboxylate;  
 (1R)-1-[3-(diallylcarbamoyl)phenyl]-3-phenylpropyl  
 (1R)-2-(3,3-dimethyl-2-oxopentanoyl) cyclohexane-1-carboxylate;



ethyl 1-(2-oxo-3-phenylpropanoyl)-2-piperidinecarboxylate;

ethyl 1-pyruvoyl-2-piperidinecarboxylate;  
ethyl 1-(2-oxobutanoyl)-2-piperidinecarboxylate;  
ethyl 1-(3-methyl-2-oxobutanoyl)-2-  
piperidinecarboxylate;  
ethyl 1-(4-methyl-2-oxopentanoyl)-2-  
piperidinecarboxylate;  
ethyl 1-(3,3-dimethyl-2-oxobutanoyl)-2-  
piperidinecarboxylate;  
ethyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-  
piperidinecarboxylate;  
4-[2-(ethyloxycarbonyl)piperidino]-2,2-dimethyl-3,4-  
dioxobutyl acetate;  
ethyl 1-[2-(2-hydroxytetrahydro-2H-2-pyranyl)-2-  
oxoacetyl]-2-piperidinecarboxylate;  
ethyl 1-[2-(2-methoxytetrahydro-2H-2-pyranyl)-2-  
oxoacetyl]-2-piperidinecarboxylate;  
ethyl 1-[2-(1-hydroxycyclohexyl)-2-oxoacetyl]-2-  
piperidinecarboxylate;  
ethyl 1-[2-(1-methoxycyclohexyl)-2-oxoacetyl]-2-  
piperidinecarboxylate;  
ethyl 1-(2-cyclohexyl-2-oxoacetyl)-2-  
piperidinecarboxylate;  
ethyl 1-(2-oxo-2-piperidinoacetyl)-2-  
piperidinecarboxylate;  
ethyl 1-[2-(3,4-dihydro-2H-6-pyranyl)-2-oxoacetyl]-2-  
piperidinecarboxylate;  
ethyl 1-(2-oxo-2-phenylacetyl)-2-piperidinecarboxylate;

ethyl 1-(4-methyl-2-oxo-1-thioxopentyl)-2-piperidinecarboxylate;

3-phenylpropyl 1-(2-hydroxy-3,3-dimethylpentanoyl)-2-piperidinecarboxylate;

(1R)-1-phenyl-3-(3,4,5-trimethoxyphenyl)propyl 1-(3,3-dimethylbutanoyl)-2-piperidinecarboxylate;

(1R)-1,3-diphenylpropyl 1-(benzylsulfonyl)-2-piperidinecarboxylate;

3-(3,4,5-trimethoxyphenyl)propyl 1-(benzylsulfonyl)-2-piperidinecarboxylate;

1-(2-[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2H-2-pyranyl)-2-oxoacetyl)-2-piperidinecarboxylic acid;

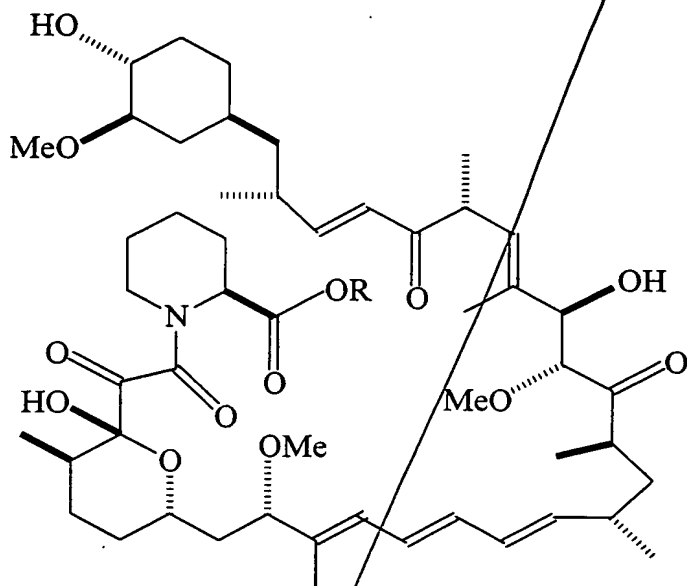
methyl 1-(2-[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2H-2-pyranyl)-2-oxoacetyl)-2-piperidinecarboxylate;

isopropyl 1-(2-[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2H-2-pyranyl)-2-oxoacetyl)-2-piperidinecarboxylate;

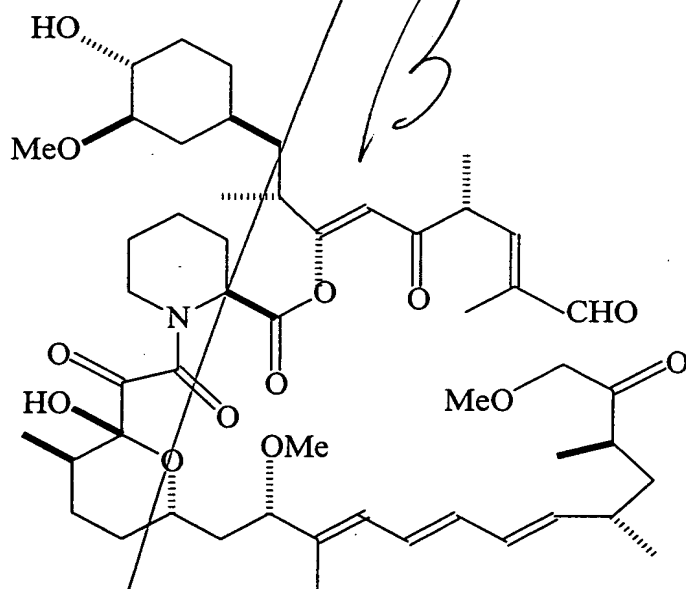
benzyl 1-(2-[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2H-2-pyranyl)-2-oxoacetyl)-2-piperidinecarboxylate;

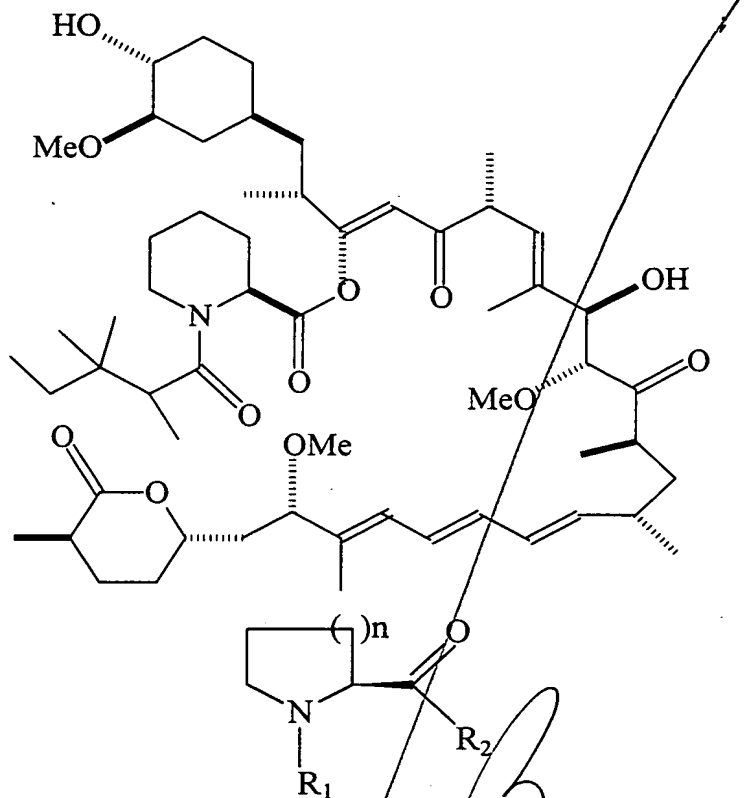
1-phenylethyl 1-(2-[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-

2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2H-2-pyranyl)-2-oxoacetyl)-2-piperidinecarboxylate;  
(Z)-3-phenyl-2-propenyl 1-(2-[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2H-2-pyranyl)-2-oxoacetyl)-2-piperidinecarboxylate;  
3-(3,4-dimethoxyphenyl)propyl 1-(2-[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2H-2-pyranyl)-2-oxoacetyl)-2-piperidinecarboxylate;  
N2-benzyl-1-(2-[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2H-2-pyranyl)-2-oxoacetyl)-2-piperidinecarboxylate;  
N2-(3-phenylpropyl)-1-(2-[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2H-2-pyranyl)-2-oxoacetyl)-2-piperidinecarboxylate;



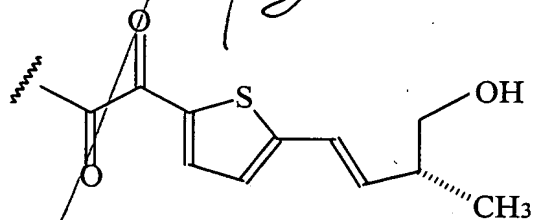
wherein R is methyl (Me); or benzyl (Bn);



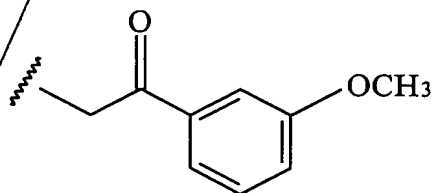


wherein

$n = 2,$   
 $R_1 =$

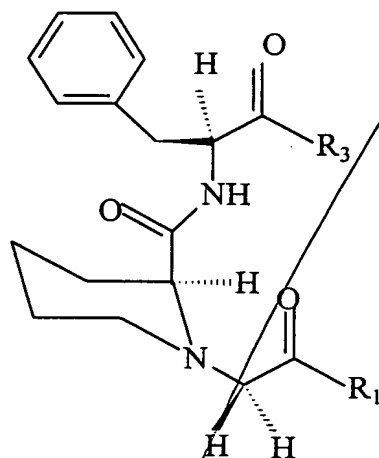


or



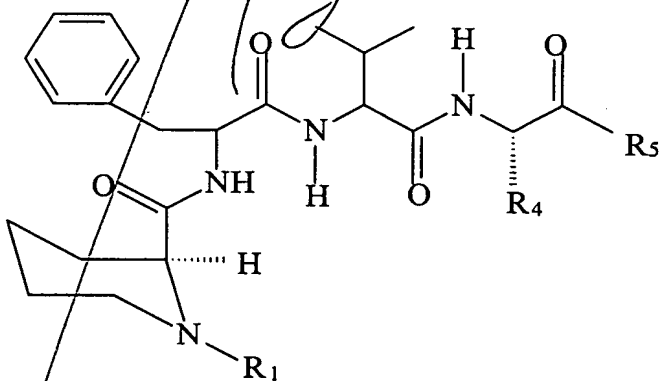
and

$R_2 = \text{Phe-o-tert-butyl};$



wherein

- |                                  |  |
|----------------------------------|--|
| $R_1 = m\text{-OCH}_3\text{Ph},$ | $R_3 = \text{Val-o-tert-butyl};$           |
| $R_1 = m\text{-OCH}_3\text{Ph},$ | $R_3 = \text{Leu-o-tert-butyl};$           |
| $R_1 = m\text{-OCH}_3\text{Ph},$ | $R_3 = \text{Ileu-o-tert-butyl};$          |
| $R_1 = m\text{-OCH}_3\text{Ph},$ | $R_3 = \text{hexahydro-Phe-o-tert-butyl};$ |
| $R_1 = m\text{-OCH}_3\text{Ph},$ | $R_3 = \text{allylalanine-o-tert-butyl};$  |
| $R_1 = \text{B-naphthyl};$       | $R_3 = \text{Val-o-tert-butyl};$           |



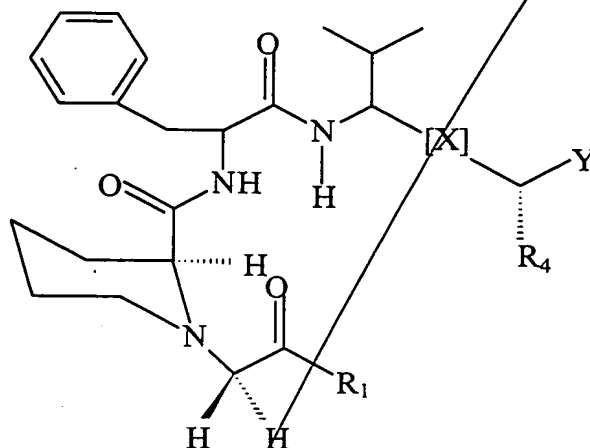
wherein

- $R_1 = \text{CH}_2(\text{CO})-m\text{-OCH}_3\text{Ph}$   
 $R_4 = \text{CH}_2\text{Ph}$   
 $R_5 = \text{OCH}_3;$

or

- $R_1 = \text{CH}_2(\text{CO})-\text{B-naphthyl}$   
 $R_4 = \text{CH}_2\text{Ph}$   
 $R_5 = \text{OCH}_3;$

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wherein

$R_1 = m\text{-OCH}_3\text{Ph}$   
 $X = \text{trans-CH=CH}$   
 $R_4 = \text{H}$   
 $Y = \text{OC(o)Ph};$

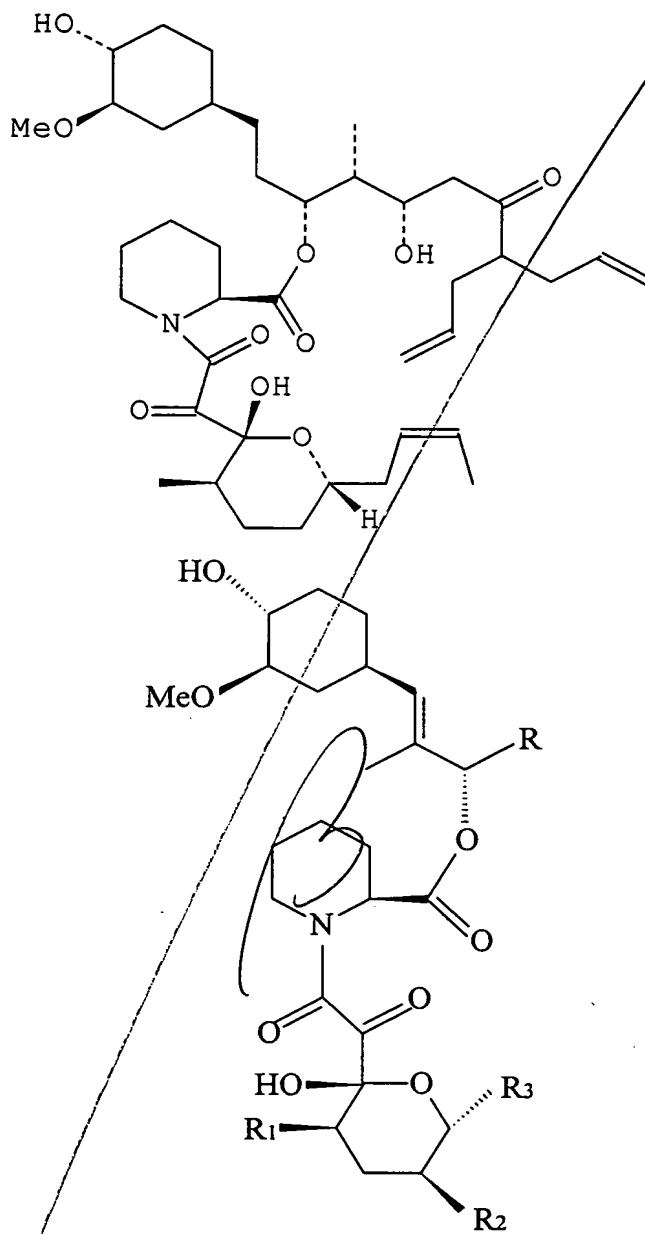
$R_1 = \text{OCH}_3\text{Ph}$   
 $X = \text{trans-CH=CH}$   
 $R_4 = \text{H}$   
 $Y = \text{OC(o)CF}_3;$

$R_1 = m\text{-OCH}_3\text{Ph}$   
 $X = \text{trans-CH=CHI}$   
 $R_4 = -$   
 $Y = -;$

$R_1 = m\text{-OCH}_3\text{Ph}$   
 $X = \text{trans-CH=CH}$   
 $R_4 = \text{H}$   
 $Y = \text{OCH}_2\text{CH=CH}_2;$

$R_1 = m\text{-OCH}_3\text{Ph}$   
 $X = \text{C=O}$   
 $R_4 = \text{H}$   
 $Y = \text{Ph};$

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wherein

$R_1 = H,$        $R_2 = OMe,$  and       $R_3 = CH_2OMe;$   
 $R_1 = H,$        $R_2 = H,$  and       $R_3 = H;$   
 $R_1 = Me,$        $R_2 = H,$  and       $R_3 = H;$

(E)-3-(3,4-dichlorophenyl)-2-propenyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;

(E)-3-(3,4,5-trimethoxyphenyl)-2-propenyl 1-(3,3-

dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;  
(E)-3-phenyl-2-propenyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;  
(E)-3-((3-(2,5-dimethoxy)-phenylpropyl)phenyl)-2-propenyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;  
4-(4-methoxyphenyl)butyl 1-(2-oxo-2-phenylacetyl)-2-piperidinecarboxylate;  
3-phenylpropyl 1-(2-oxo-2-phenylacetyl)-2-piperidinecarboxylate;  
3-(3-pyridyl)propyl 1-(2-oxo-2-phenylacetyl)-2-piperidinecarboxylate;  
3-(3-pyridyl)propyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;  
4-phenyl-1-(3-phenylpropyl)butyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;  
4-(4-methoxyphenyl)butyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;  
1-(4-methoxyphenethyl)-4-phenylbutyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;  
3-(2,5-dimethoxyphenyl)propyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;  
3-(1,3-benzodioxol-5-yl)propyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;  
1-phenethyl-3-phenylpropyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;  
4-(4-methoxyphenyl)butyl 1-(2-cyclohexyl-2-oxoacetyl)-

2-piperidinecarboxylate;  
 3-cyclohexylpropyl 1-(2-cyclohexyl-2-oxoacetyl)-2-  
 piperidinecarboxylate;  
 3-phenylpropyl 1-(2-cyclohexyl-2-oxoacetyl)-2-  
 piperidinecarboxylate;  
 3-cyclohexylpropyl 1-(3,3-dimethyl-2-oxobutanoyl)-2-  
 piperidinecarboxylate;  
 3-phenylpropyl 1-(3,3-dimethyl-2-oxobutanoyl)-2-  
 piperidinecarboxylate;  
 4-(4-methoxyphenyl)butyl 1-(3,3-dimethyl-2-  
 oxobutanoyl)-2-piperidinecarboxylate; and  
 4-phenyl-1-(3-phenylpropyl)butyl 1-(3,3-dimethyl-2-  
 oxobutanoyl)-2-piperidinecarboxylate; and

pharmaceutically acceptable salts, esters, and  
 15 solvates thereof.

11. A pharmaceutical composition which comprises:  
 (i) an effective amount of a pipecolic acid  
 derivative for treating a vision disorder,  
 20 improving vision, treating memory  
 impairment, or enhancing memory performance  
 in an animal; and  
 (ii) a pharmaceutically acceptable carrier.

25 12. The pharmaceutical composition of claim 11,  
 wherein the pipecolic acid derivative has an affinity  
 for an FKBP-type immunophilin.

13. The pharmaceutical composition of claim 12,  
wherein the FKBP-type immunophilin is FKBP-12.

14. The pharmaceutical composition of claim 11,  
5 wherein the pipecolic acid derivative is  
immunosuppressive or non-immunosuppressive.

15. The pharmaceutical composition of claim 11,  
wherein the vision disorder is selected from the group  
10 consisting of: visual impairments; orbital disorders;  
disorders of the lacrimal apparatus; disorders of the  
eyelids; disorders of the conjunctiva; disorders of the  
cornea; cataract; disorders of the uveal tract;  
disorders of the retina; disorders of the optic nerve  
15 or visual pathways; free radical induced eye disorders  
and diseases; immunologically-mediated eye disorders  
and diseases; eye injuries; and symptoms and  
complications of eye disease, eye disorder, or eye  
injury.

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16. The pharmaceutical composition of claim 11,  
wherein the pipecolic acid derivative is Way-124,666.

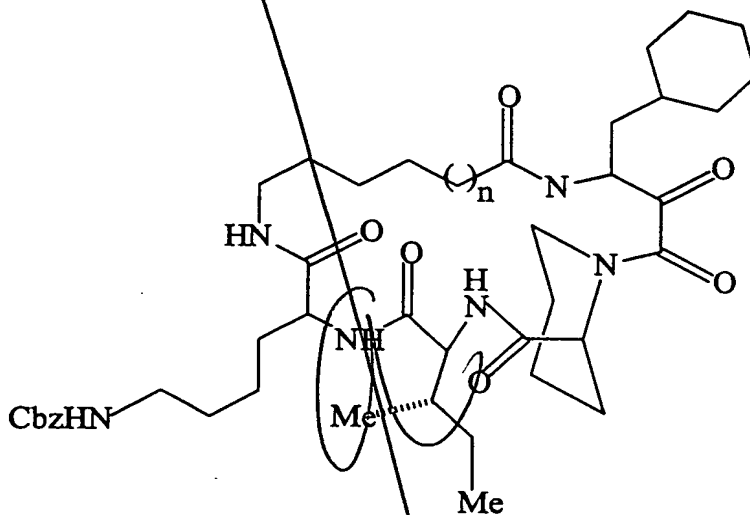
17. The pharmaceutical composition of claim 11,  
25 wherein the pipecolic acid derivative is rapamycin.

18. The pharmaceutical composition of claim 11,  
wherein the pipecolic acid derivative is Rap-Pa.

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19. The pharmaceutical composition of claim 11,  
wherein the pipercolic acid derivative is SLB-506.

20. The pharmaceutical composition of claim 11,  
5 wherein the pipercolic acid derivative is selected from  
the group consisting of:



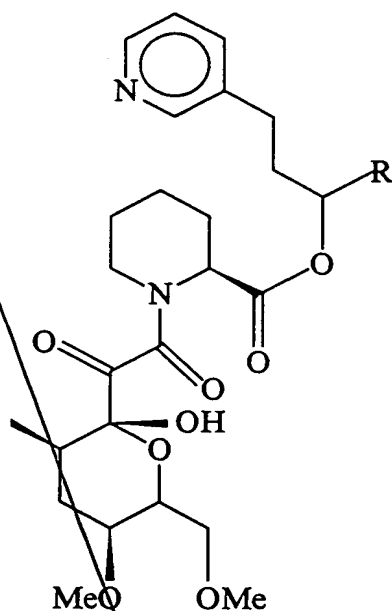
wherein n is 1; 2; or 3;

4-(4-methoxyphenyl)butyl (2S)-1-[2-(3,4,5-trimethoxyphenyl)acetyl]hexahydro-2-pyridinecarboxylate;

4-(4-methoxyphenyl)butyl (2S)-1-[2-(3,4,5-trimethoxyphenyl)acryloyl]hexahydro-2-pyridinecarboxylate;

4-(4-methoxyphenyl)butyl (2S)-1-[2-(3,4,5-trimethoxyphenyl)propanoyl]hexahydro-2-pyridinecarboxylate;

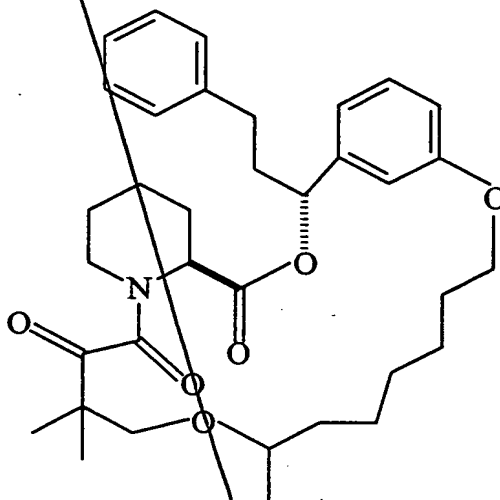
4-(4-methoxyphenyl)butyl (2S)-1-[2-oxo-2-(3,4,5-trimethoxyphenyl)acetyl]hexahydro-2-pyridinecarboxylate;



- 3-cyclohexylpropyl (2S)-1-(3,3-dimethyl-2-oxopentanoyl)hexahydro-2-pyridinecarboxylate;
- 3-phenylpropyl (2S)-1-(3,3-dimethyl-2-oxopentanoyl)hexahydro-2-pyridinecarboxylate;
- 3-(3,4,5-trimethoxyphenyl)propyl (2S)-1-(3,3-dimethyl-2-oxopentanoyl)hexahydro-2-pyridinecarboxylate;
- (1R)-2,2-dimethyl-1-phenethyl-3-butenyl (2S)-1-(3,3-dimethyl-2-oxopentanoyl)hexahydro-2-pyridinecarboxylate;
- (1R)-1,3-diphenylpropyl (2S)-1-(3,3-dimethyl-2-oxopentanoyl)hexahydro-2-pyridinecarboxylate;
- (1R)-1-cyclohexyl-3-phenylpropyl (2S)-1-(3,3-dimethyl-2-oxopentanoyl)hexahydro-2-pyridinecarboxylate;
- (1S)-1,3-diphenylpropyl (2S)-1-(3,3-dimethyl-2-oxopentanoyl)hexahydro-2-pyridinecarboxylate;
- (1S)-1-cyclohexyl-3-phenylpropyl (2S)-1-(3,3-dimethyl-2-oxopentanoyl)hexahydro-2-pyridinecarboxylate;

(22aS)-15,15-dimethylperhydropyrido[2,1-c][1,9,4]dioxazacyclononadecine-1,12,16,17-tetraone;

(24aS)-17,17-dimethylperhydropyrido[2,1-c][1,9,4]dioxazacyclohenicosine-1,14,18,19-tetraone;

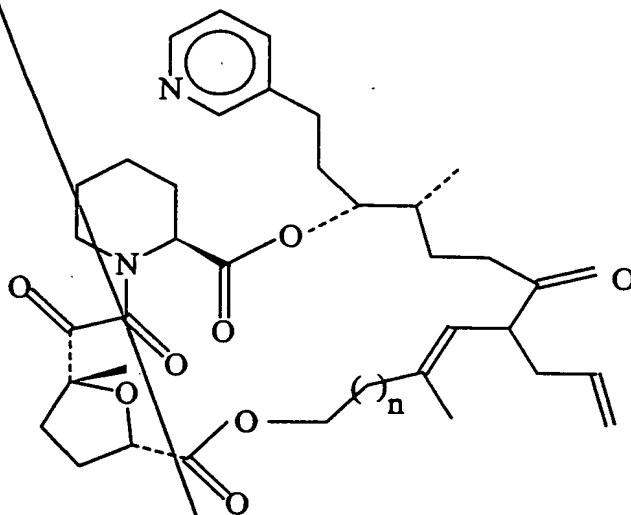


(3R,4R,23aS)-8-allyl-4,10-dimethyl-3-[2-(3-pyridyl)ethyl]-1,3,4,5,6,7,8,11,12,15,16,17,18,20,21,22,23,23a-octadecahydro-14H-pyrido[2,1-c][1,10,4]dioxazacycloicosine-1,7,14,17,18-pentaone;

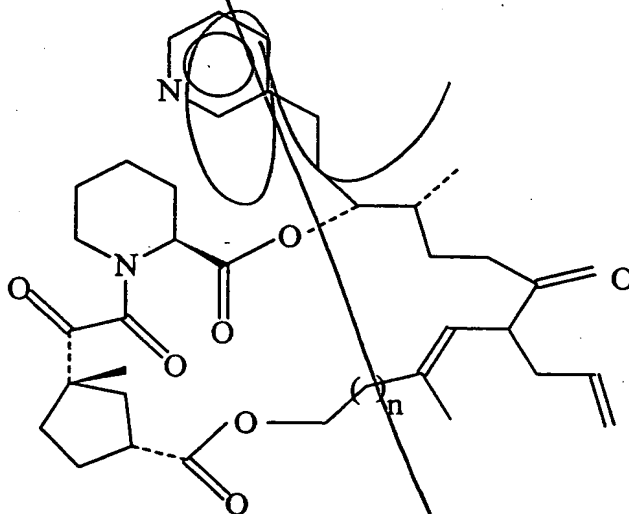
(3R,4R,24aS)-8-allyl-4,10-dimethyl-3-[2-(3-pyridyl)ethyl]-1,3,4,5,6,7,8,11,12,14,15,16,17,18,19,21,22,23,24,24a-icosahydropyrido[2,1-c][1,11,4]dioxazacyclohenicosine-1,7,14,18,19-pentaone;

(3R,4R,25aS)-8-allyl-4,10-dimethyl-3-[2-(3-pyridyl)ethyl]-1,3,4,5,6,7,8,11,12,15,16,17,18,19,20,22,23,24,25,25a-icosahydro-14H-pyrido[2,1-c]

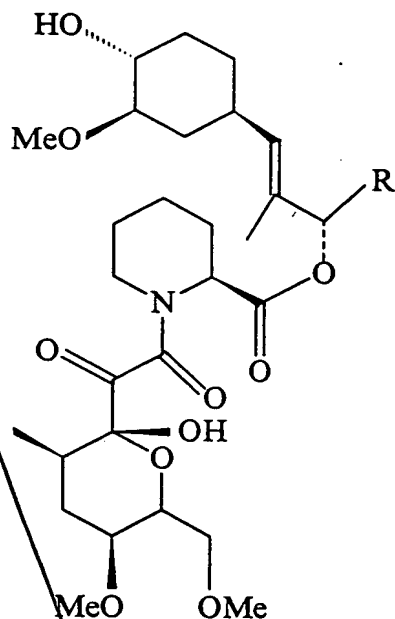
[1,12,4]dioxazacyclodocosine-1,7,14,19,20-pentaone;



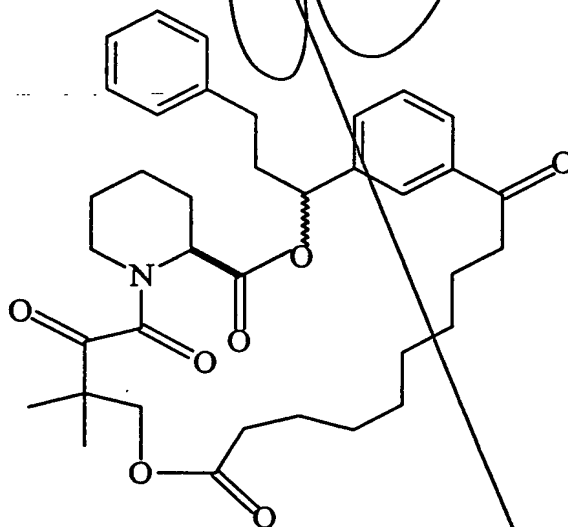
wherein n is 1; 2; or 3;



wherein n is 1; 2; or 3;



(1R)-1-(3-benzoylphenyl)-3-phenylpropyl (1R)-2-(3,3-dimethyl-2-oxopentanoyl)cyclohexane-1-carboxylate;  
 (1R)-1-[3-(diallylcarbamoyl)phenyl]-3-phenylpropyl  
 (1R)-2-(3,3-dimethyl-2-oxopentanoyl)cyclohexane-1-carboxylate;



ethyl 1-(2-oxo-3-phenylpropanoyl)-2-piperidinecarboxylate;

ethyl 1-pyruvoyl-2-piperidinecarboxylate;  
ethyl 1-(2-oxobutanoyl)-2-piperidinecarboxylate;  
ethyl 1-(3-methyl-2-oxobutanoyl)-2-  
piperidinecarboxylate;  
ethyl 1-(4-methyl-2-oxopentanoyl)-2-  
piperidinecarboxylate;  
ethyl 1-(3,3-dimethyl-2-oxobutanoyl)-2-  
piperidinecarboxylate;  
ethyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-  
piperidinecarboxylate;  
4-[2-(ethyloxycarbonyl)piperidino]-2,2-dimethyl-3,4-  
dioxobutyl acetate;  
ethyl 1-[2-(2-hydroxytetrahydro-2H-2-pyranyl)-2-  
oxoacetyl]-2-piperidinecarboxylate;  
ethyl 1-[2-(2-methoxytetrahydro-2H-2-pyranyl)-2-  
oxoacetyl]-2-piperidinecarboxylate;  
ethyl 1-[2-(1-hydroxycyclohexyl)-2-oxoacetyl]-2-  
piperidinecarboxylate;  
ethyl 1-[2-(1-methoxycyclohexyl)-2-oxoacetyl]-2-  
piperidinecarboxylate;  
ethyl 1-(2-cyclohexyl-2-oxoacetyl)-2-  
piperidinecarboxylate;  
ethyl 1-(2-oxo-2-piperidinoacetyl)-2-  
piperidinecarboxylate;  
ethyl 1-[2-(3,4-dihydro-2H-6-pyranyl)-2-oxoacetyl]-2-  
piperidinecarboxylate;  
ethyl 1-(2-oxo-2-phenylacetyl)-2-piperidinecarboxylate;

ethyl 1-(4-methyl-2-oxo-1-thioxopentyl)-2-piperidinecarboxylate;

3-phenylpropyl 1-(2-hydroxy-3,3-dimethylpentanoyl)-2-piperidinecarboxylate;

(1R)-1-phenyl-3-(3,4,5-trimethoxyphenyl)propyl 1-(3,3-dimethylbutanoyl)-2-piperidinecarboxylate;

(1R)-1,3-diphenylpropyl 1-(benzylsulfonyl)-2-piperidinecarboxylate;

3-(3,4,5-trimethoxyphenyl)propyl 1-(benzylsulfonyl)-2-piperidinecarboxylate;

1-(2-[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2H-2-pyranyl)-2-oxoacetyl)-2-piperidinecarboxylic acid;

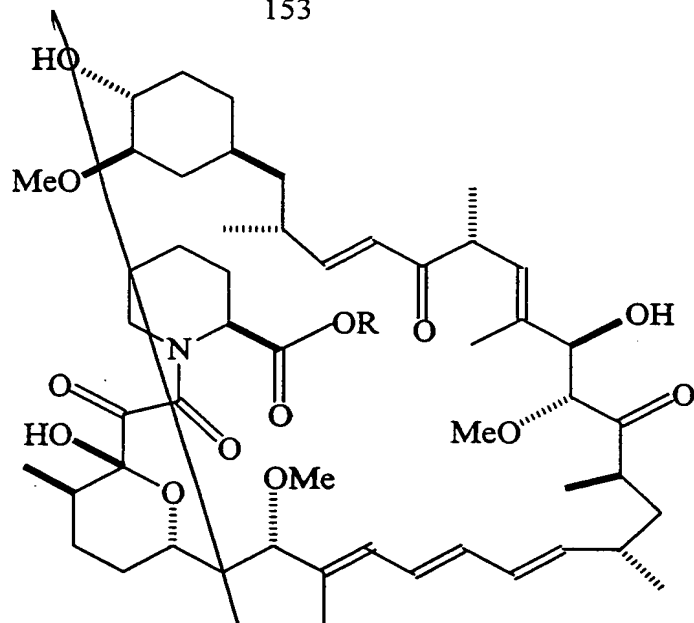
methyl 1-(2-[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2H-2-pyranyl)-2-oxoacetyl)-2-piperidinecarboxylate;

isopropyl 1-(2-[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2H-2-pyranyl)-2-oxoacetyl)-2-piperidinecarboxylate;

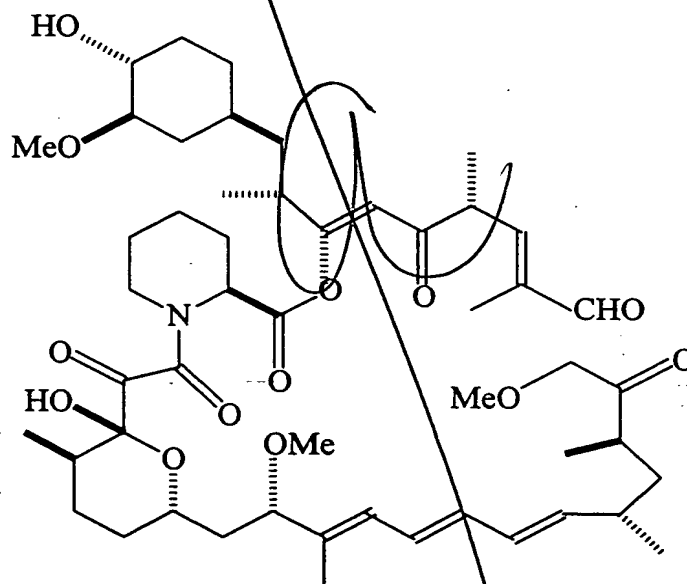
benzyl 1-(2-[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2H-2-pyranyl)-2-oxoacetyl)-2-piperidinecarboxylate;

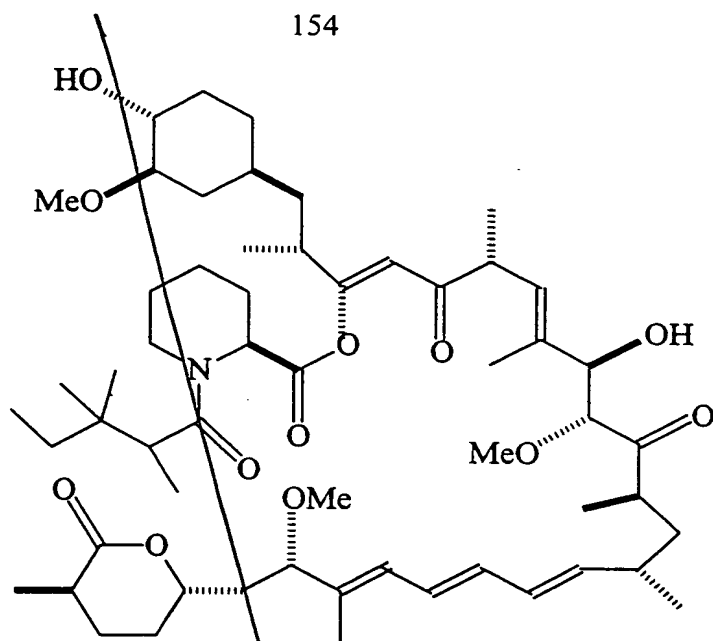
1-phenylethyl 1-(2-[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-

2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2H-2-pyranyl)-2-oxoacetyl)-2-piperidinecarboxylate;  
(Z)-3-phenyl-2-propenyl 1-(2-[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2H-2-pyranyl)-2-oxoacetyl)-2-piperidinecarboxylate;  
3-(3,4-dimethoxyphenyl)propyl 1-(2-[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2H-2-pyranyl)-2-oxoacetyl)-2-piperidinecarboxylate;  
N2-benzyl-1-(2-[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2H-2-pyranyl)-2-oxoacetyl)-2-piperidinecarboxylate;  
N2-(3-phenylpropyl)-1-(2-[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2H-2-pyranyl)-2-oxoacetyl)-2-piperidinecarboxylate;



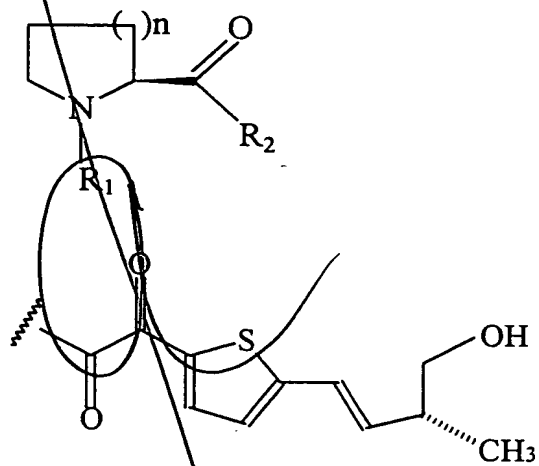
wherein R is methyl (Me); or benzyl (Bn);



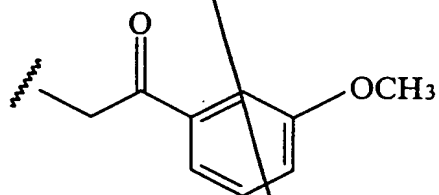


wherein

$n = 2,$   
 $R_1 =$

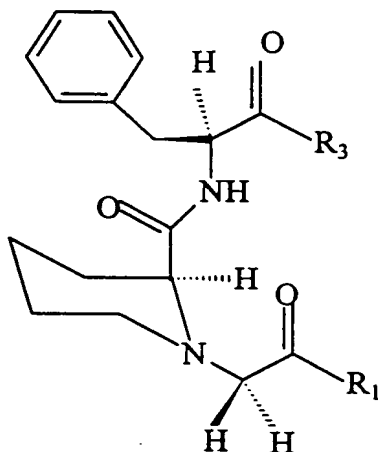


or



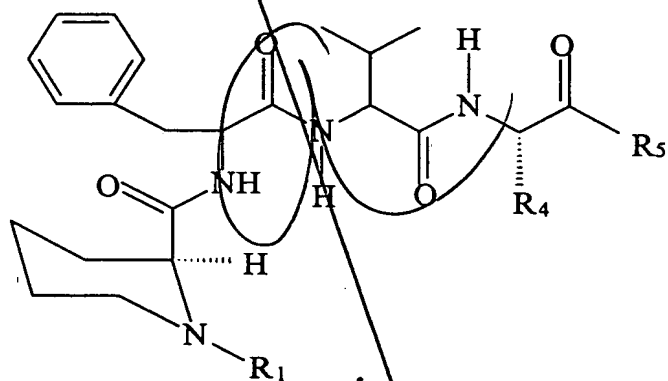
and

$R_2 = \text{Phe-o-tert-butyl};$



wherein

- |                                  |  |
|----------------------------------|--|
| $R_1 = m\text{-OCH}_3\text{Ph},$ | $R_3 = \text{Val-o-tert-butyl};$           |
| $R_1 = m\text{-OCH}_3\text{Ph},$ | $R_3 = \text{Leu-o-tert-butyl};$           |
| $R_1 = m\text{-OCH}_3\text{Ph},$ | $R_3 = \text{Ileu-o-tert-butyl};$          |
| $R_1 = m\text{-OCH}_3\text{Ph},$ | $R_3 = \text{hexahydro-Phe-o-tert-butyl};$ |
| $R_1 = m\text{-OCH}_3\text{Ph},$ | $R_3 = \text{allylalanine-o-tert-butyl};$  |
| $R_1 = \text{B-naphthyl};$       | $R_3 = \text{Val-o-tert-butyl};$           |

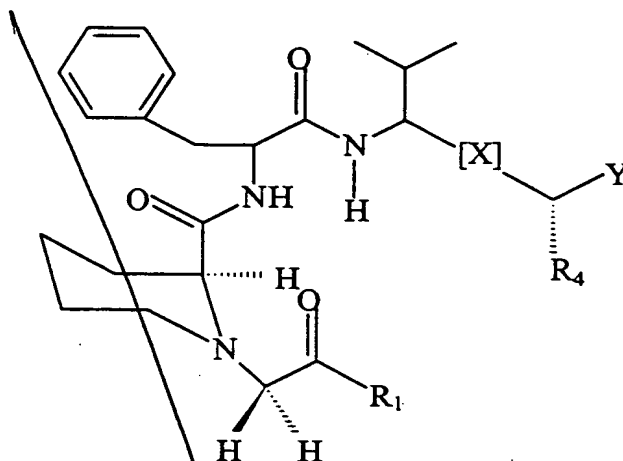


wherein

- $R_1 = \text{CH}_2(\text{CO})-m\text{-OCH}_3\text{Ph}$   
 $R_4 = \text{CH}_2\text{Ph}$   
 $R_5 = \text{OCH}_3;$

or

- $R_1 = \text{CH}_2(\text{CO})-\text{B-naphthyl}$   
 $R_4 = \text{CH}_2\text{Ph}$   
 $R_5 = \text{OCH}_3;$



wherein

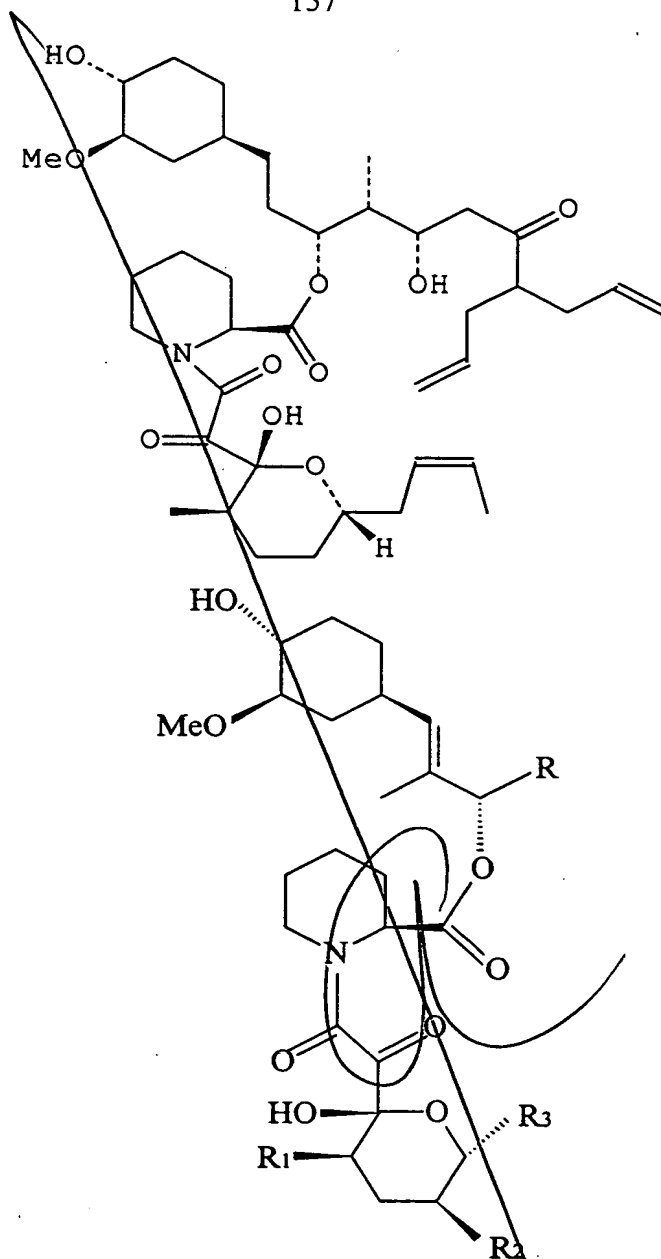
R<sub>1</sub> = m-OCH<sub>3</sub>Ph  
 X = trans-CH=CH  
 R<sub>4</sub> = H  
 Y = OC(o)Ph;

R<sub>1</sub> = OCH<sub>3</sub>Ph  
 X = trans-CH=CH  
 R<sub>4</sub> = H  
 Y = OC(o)CF<sub>3</sub>;

R<sub>1</sub> = m-OCH<sub>3</sub>Ph  
 X = trans-CH=CHI  
 R<sub>4</sub> = -  
 Y = -;

R<sub>1</sub> = m-OCH<sub>3</sub>Ph  
 X = trans-CH=CH  
 R<sub>4</sub> = H  
 Y = OCH<sub>2</sub>CH=CH<sub>2</sub>;

R<sub>1</sub> = m-OCH<sub>3</sub>Ph  
 X = C=O  
 R<sub>4</sub> = H  
 Y = Ph;



wherein

$R_1 = H,$        $R_2 = OMe,$  and       $R_3 = CH_2OMe;$   
 $R_1 = H,$        $R_2 = H,$  and       $R_3 = H;$   
 $R_1 = Me,$        $R_2 = H,$  and       $R_3 = H;$

(E)-3-(3,4-dichlorophenyl)-2-propenyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;

(E)-3-(3,4,5-trimethoxyphenyl)-2-propenyl 1-(3,3-

dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;  
(E)-3-phenyl-2-propenyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;  
(E)-3-((3-(2,5-dimethoxy)-phenylpropyl)phenyl)-2-propenyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;  
4-(4-methoxyphenyl)butyl 1-(2-oxo-2-phenylacetyl)-2-piperidinecarboxylate;  
3-phenylpropyl 1-(2-oxo-2-phenylacetyl)-2-piperidinecarboxylate;  
3-(3-pyridyl)propyl 1-(2-oxo-2-phenylacetyl)-2-piperidinecarboxylate;  
3-(3-pyridyl)propyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;  
4-phenyl-1-(3-phenylpropyl)butyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;  
4-(4-methoxyphenyl)butyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;  
1-(4-methoxyphenethyl)-4-phenylbutyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;  
3-(2,5-dimethoxyphenyl)propyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;  
3-(1,3-benzodioxol-5-yl)propyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;  
1-phenethyl-3-phenylpropyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;  
4-(4-methoxyphenyl)butyl 1-(2-cyclohexyl-2-oxoacetyl)-

2-piperidinecarboxylate;  
3-cyclohexylpropyl 1-(2-cyclohexyl-2-oxoacetyl)-2-  
piperidinecarboxylate;  
3-phenylpropyl 1-(2-cyclohexyl-2-oxoacetyl)-2-  
piperidinecarboxylate;  
3-cyclohexylpropyl 1-(3,3-dimethyl-2-oxobutanoyl)-2-  
piperidinecarboxylate;  
3-phenylpropyl 1-(3,3-dimethyl-2-oxobutanoyl)-2-  
piperidinecarboxylate;  
4-(4-methoxyphenyl)butyl 1-(3,3-dimethyl-2-  
oxobutanoyl)-2-piperidinecarboxylate; and  
4-phenyl-1-(3-phenylpropyl)butyl 1-(3,3-dimethyl-2-  
oxobutanoyl)-2-piperidinecarboxylate; and

pharmaceutically acceptable salts, esters, and  
solvates thereof.

5

<sup>6</sup> 21. The method of claim <sup>97</sup> 1, which is for improving naturally-occurring vision in an animal, in the absence of any ophthalmologic disorder, disease, or injury.

10

~~22. The pharmaceutical composition of claim 11, which is for improving naturally-occurring vision in an animal, in the absence of any ophthalmologic disorder, disease, or injury.~~

20

<sup>7</sup> 23. The method of claim <sup>97</sup> 1, wherein the <sup>Compound</sup> ~~pipicolic~~ acid derivative is administered to said animal in combination with an effective amount of one or more factor(s) useful in treating vision disorders, improving vision, treating memory impairment, or enhancing memory performance in an animal.

25

<sup>8</sup> 24. The method of claim <sup>7</sup> 23, wherein the one or more factor(s) is/are selected from the group consisting of immunosuppressants for treating autoimmune, inflammatory, and immunologically-mediated disorders; wound healing agents for treating wounds resulting from injury or surgery; antiglaucomatous medications for treating abnormally elevated intraocular pressure; neurotrophic factors and growth

factors for treating neurodegenerative disorders or stimulating neurite outgrowth; compounds effective in limiting or preventing hemorrhage or neovascularization for treating macular degeneration; and antioxidants for treating oxidative damage to eye tissues.

25. The pharmaceutical composition of claim 11, wherein the pipecolic acid derivative is administered to said animal in combination with an effective amount of one or more factor(s) useful in treating vision disorders, improving vision, treating memory impairment, or enhancing memory performance in an animal.

26. The pharmaceutical composition of claim 25, wherein the one or more factor(s) is/are selected from the group consisting of immunosuppressants for treating autoimmune, inflammatory, and immunologically-mediated disorders; wound healing agents for treating wounds resulting from injury or surgery; antiglaucomatous medications for treating abnormally elevated intraocular pressure; neurotrophic factors and growth factors for treating neurodegenerative disorders or stimulating neurite outgrowth; compounds effective in limiting or preventing hemorrhage or neovascularization for

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regeneration  
damage to

Add C17

$\frac{\partial}{\partial t} \left( \frac{\partial \mathbf{u}}{\partial t} \right) = \frac{\partial}{\partial t} \left( \frac{\partial \mathbf{u}}{\partial t} \right)$